

place, it is doubtful whether systematic chemistry, entirely divorced from elementary physics, is a useful introduction. It is further open to question whether the notion of atomic weights, chemical equations, and valency can be assimilated at this stage; yet these subjects are discussed within the first twenty pages. Finally, we submit that it is unnecessary and undesirable for a beginner to be introduced to more than a small fraction of the whole gamut of the elements and some of their chief compounds, even though they may find some application in the arts and manufactures. No doubt the book is intended to be associated with laboratory practice or some form of experimental demonstration, for there is not a single illustration representing chemical apparatus. For so small a volume, which is not much larger in dimensions than the "People's Books," the price of 2s. 6d. seems excessive.

(2) The chief novelty in Dr. Caven's little book on qualitative analysis is the arrangement. Instead of presenting the reactions for the individual metals in their group order, as is usually done, the author directs the student first to the study of the individual reagents, so that the basis of group classification may become evident at the outset. Thus the action of heat and other dry tests are taken first, and are followed by the action of solvents and, finally, by that of the group reagents. This forms Part i., while Part ii. is devoted to the usual description of reactions for the metals and acids, taken in group order. Part iii. contains a short summary of the process of analysis.

The author considers that this arrangement has proved more satisfactory in actual practice than the older scheme, and, moreover, regards it as more scientific. No doubt the first claim is well founded on its alleged success; the second merely turns on a choice between the inductive and the deductive method, but who shall say which is the more scientific?
J. B. C.

OUR BOOKSHELF.

The Statesman's Year-Book, Statistical and Historical Annual of the States of the World for the Year 1917. Edited by Dr. J. Scott Keltie, assisted by Dr. M. Epstein. Fifty fourth annual publication. Revised after official returns. Pp. xlv + 1504 + plates 4. (London: Macmillan and Co., Ltd., 1917.) Price 12s. 6d. net.

THE new edition of this valuable year-book has been slightly reduced in size without lessening its usefulness. Considerable difficulties have had to be faced in the revision of the statistics of beligerent, and especially enemy, countries, but these have been overcome in many cases. The value of the book is enhanced by the figures in most countries being given for at least the last pre-war year in addition to later years, where the latter were available. There are four maps, showing respectively: States engaged in the war up to May 10, 1917; Arabia, with political divisions; the railways of South America; and the canals and inland waterways of the United Kingdom. The

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additions and corrections contain material received too late to be embodied in the work, and include a section on Arabia. Accurate information about Russian railways is difficult enough to obtain in peace time, and the editors have been wise to give a list of lines "being built, approved for construction, or projected" without further discrimination. The Amur line, however, is now built, and we believe has been in use for a year or more. Among other useful matter in the introductory tables are the figures for the world's production of various metals, sugar, and grain. The list of the chief events of the war is brought up to May, 1917, and a further list of the chief books on the war is added.

Microscopic Analysis of Cattle-Foods. By T. N. Morris. Pp. viii + 74 + figs. 54. (Cambridge: At the University Press, 1917.) Price 2s. net.

It is curious that whereas the chemical analysis of cattle-foods has given rise to a considerable array of text-books, the equally, or often more, important microscopic analysis has hitherto been neglected by the English writer apart from its treatment in the pages of Winton's standard treatise on vegetable foods in general.

The latter has been judiciously drawn upon in the compilation of the present work, which is put forward as "a brief guide in the recognition of the common legitimate constituents of cattle-foods," and makes no claim to be exhaustive. Within its few pages it gives an admirable summary of information on methods of examination and the chief histological characters of the common cereals, pulses, oil-seeds, cruciferous seeds, and nuts. The information is clear, concise, and accurate, and the accompanying diagrams are in many cases excellent. Very few of the common impurities of cattle-foods are omitted, the chief exceptions one notes being coffee husks, dari, gram, and sesame. A note might also have been included on the castor bean, which has frequently played a sinister part as an ingredient of oil-cakes, and in alleged non-toxic form is now seeking a place as a legitimate cattle feeding-stuff. No reference is made to animal matters, such as meat and fish refuse, which are now coming into increasing use on the farm. The book should prove very useful to the agricultural student, and within its limits also to the agricultural analyst.

Science and Industry: The Place of Cambridge in any Scheme for their Combination. By Sir Richard T. Glazebrook. Pp. 51. (Cambridge: At the University Press, 1917.) Price 1s. 6d. net.

READERS will be glad that the Rede lecture for this year, delivered by Sir Richard Glazebrook on June 9, is now available in book form. We were able to publish the greater part of the lecture in our issue for June 21 (vol. xcix., p. 333), and it will suffice here to say that we hope the essay will be widely studied, dealing as it does with matters of the highest importance which must be handled boldly if the future welfare of the nation is to be assured.